# Appendix G – Upland Wildlife Habitat Field Measurements used for the LCGMA Evaluation

To characterize wildlife habitat and as a supplement to the range assessment information recorded on standard BLM Range Health field forms, BLM also measured or estimated the following attributes at most of the stops where assessments were conducted. The locations where these measurements were taken are part of the assessment record.

***Sagebrush and bluebunch wheatgrass heights –***
Bluebunch wheatgrass heights were measured at ungrazed sites to the top of the tallest erect leaves or , in the case of robust grass plants, to the point of leaf droop (not to the top of the seed heads). This was done to determine if key grass species in LCGMA had the potential to provide lateral cover (7" or more) necessary to hide nesting sage grouse. These grass height measuring protocols have been used in Oregon sage grouse habitat research. No forb heights were measured.

Sagebrush heights were measured to the top of the tallest leaves (not the top of the seed heads).

***Distribution of sagebrush canopy classes-***
BLM estimated the distribution of sagebrush canopy classes per pasture in a way comparable to Appendix F, SEORMP/FEIS (see Table 9, this document). Canopy class character and distribution were determined using a combination of methods including ocular reconnaissance from vehicles and aircraft, 500 point step-points, and 100 foot line intercepts. Calibration for ocular estimates was based on line intercept and step-point sample results. Canopy values were often made up of combinations of classes.

***Note***: *None of the height and canopy cover data were collected in a manner that would withstand rigorous statistical analysis. They were collected for the purpose of sampling typical habitat character at Rangeland Health assessment locations in a manner consistent with the intent and allowable time-frames of BLM range health assessments.*

***Digital photos –***
Photos are a good supplemental assessment tool for landscape analysis that are of value when combined with standard BLM range trend studies. Range trend studies monitor small plots as proxy for vegetation change in a pasture and as such they may not provide a good sense of the overall landscape appearance, connectivity, or fragmentation in upland habitat types.

About 180 digital images of upland habitat were taken. Two or more pictures were taken in the vicinity of range health assessment sites to associate the appearance of the landscape (understandable by a wide audience) with technical field data. A subset of these photos was used as a representative **Landscape Appearance Photo Series** (Appendix J)**.** In most cases two landscape views and one understory closeup were taken. Because the photos are tied to sites located with GPS instrumentation, they may be easily located and revisited. The photos are sorted by grazing allotment and pasture.

**Habitat measures and ties to existing literature**

The objective of gathering the supplemental data was to directly link vegetative composition and structure in LCGMA with wildlife habitat requirements and preferences as described in:

- Interior Columbia Basin Ecosystem Management Project, Source Habitats for Terrestrial Vertebrates of Focus
- OR/WA BLM. 2000. Greater Sage-grouse and Sagebrush Steppe Ecosystems Management Guidelines
- Altman, R. and A. Holmes. 2000. Conservation Strategy for Landbirds in the Columbia Plateau of Eastern Oregon and Washington
- Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats, Wildlife Society Bulletin 28(4):967-985